

Application/ Control No: 10/523,890
Examiner: ELCENKO, ERIC J.

REMARKS

Applicant has amended claims 1, 6 and 7 to more specifically highlight the unique elements of the present invention. Specifically, claims 1, 6 and 7 now recite that each of the local access (AL, AL1) possesses a bidirectional radio satellite bridge. Additionally, the claims now recites that the first linking means is accomplished solely by physical cables. Claim 2 has been canceled. Additionally, Applicant has added new claims 8 and 9. These new claims merely define the nature of the physical cables used as a first linking means.

The Examiner has rejected Claims 1-3 under 35 U.S.C. § 103(a) as being unpatentable over Schuster et al., (U.S. Patent 6,954,454) in view of Wiedeman et al., (U.S. Patent 6,233,463.)

Claim 1, as amended, points out non-obvious subject matter because it recites the use of fixed peripheral devices connected by physical means to a local centralizing device, which in turn is able to communicate with other regional, local and national networks by means of satellite radio bridges.

The Schuster patent is limited to a central office network for converting analog voice and data signals into IP packets and routing them using IP routing. The methods of data transmission are limited to physical connections within a central office. Schuster does not teach, nor suggest, the use of bi-directional radio bridges to connect the local network exchange to the peripheral user access by means of bi-directional radio satellite transmitters. Even if Schuster did recite the use of satellite bridges, which Applicant does not concede, the Schuster patent fails to teach the overall invention as described in the present invention, and specifically in claim 1. Schuster fails to point out the unique network architecture of the present invention. It merely points out components found in the present invention and the general art.

The Examiner suggests that Schuster in combination with the Wiedeman patent teaches all the elements of amended claim 1. Applicant submits that Wiedeman is limited to teaching a communications systems that utilizes satellites to transmit information on a network. Wiedeman, as a reference, fails to teach all the elements of the present invention. Wiedeman points out a dual mode user terminal (i.e. a satellite

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phone with ground network capacity). Col 10, line 55 et. seq. This would correspond to the first linking means in the present invention. As such, it does not recite that the second and third linking means would be constituted by bi-directional satellite bridges. At best, Wiedeman describes a mobile (TC) peripheral device that uses satellite communication to directly connect to central network. See Figure 1, Wiedeman. Therefore, even if it were obvious to use the device as described in Wiedeman in conjunction with the network as described in Schuster, which the Applicant does not concede, the resulting combination still fails to point out the unique network architecture elements found in amended claim 1.

Claim 1 provides a network that employs the use of fixed peripheral devices which are connected to a local network by physical means, i.e. cabling. This local network is in turn connected to other local networks and regional networks by means of bi-directional satellite bridges. This allows the network to operate without the existence of a large network infrastructure (i.e. physical linking between regional, national and local networks). Neither prior art reference is directed to providing for a global network that possesses only minimal local infrastructure. Furthermore, no obvious modification of the prior art provides and points out such a network.

Schuster fails to point out a local centralizing device and the local users' connection with it. It is strictly confined to pointing out connection means between the gateway and the data distribution services. While Schuster provides for a Digital Subscriber Line Access Multiplexer (DSLAM), it fails to provide the same function as the local centralizing device as in claim 1. See Fig 2, Schuster. One of the unique elements of the present invention is that at the access level the information has already been centralized and being sent via bi-directional satellite bridge to a multi-protocol gateway device. In contrast, Schuster provides a networking solution that incorporates the gateway device into the local architecture. As such, information entering through other means (cable, wireless networking, and enterprise networking) is not locally centralized but instead sent directly to an IP router. As such, Schuster fails to provide or suggest modification of the disclosed networking element so as to achieve a robust network with minimal physical networking infrastructure.

Wiedeman also fails to point out the network architecture as described in

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amended claim 1. The Examiner states that motivation to combine Wiedeman and Schuster is to allow the user terminal access to the PSTN. However, merely modifying Schuster to incorporate satellite radio bridges does not result in the invention described by claim 1. Neither prior art reference is directed at keeping the cost of the overall network low and its robustness high. Neither prior art reference teaches a network that is designed to operate without large network infrastructure. As such, any modification of Weidman and Schuster would be limited to obvious modifications of devices and networks that relied on large networking infrastructure.

According to the Examiner, those skilled in the art would modify Schuster to incorporate the user terminal found in Wiedeman. However, the user terminal in Wiedeman (UT) is not the same device as the peripheral device in amended claim 1. The user terminal in Wiedeman connects solely through radio and satellite communication means. Therefore the UT fails to have a first linking means derived from a twisted pair or optical cabling. Combining Schuster with Wiedeman results in a networking system where the user terminals connect directly to the satellite, or use radio waves to connect to a base station which then connects to a satellite over the national PSTN network. Fig 1. As such, any resulting combination of Schuster and Wiedeman either requires extensive infrastructure (i.e. PSTN), or requires each user terminal to possess a bi-directional satellite radio bridge. In either case, the combined references would fail to provide a local centralizing device (MD) as described in amended claim 1. As such, both of these options teach away from the solution proposed by the present invention, namely providing a robust telecommunications network without substantial cost expenditure.

It is therefore clear that the cited prior art, alone or in combination, fails to point out all the elements found in amended claim 1. Specifically, the combined prior art fails to point out the use of a low cost user terminal that is physically connected a local centralizing device that in turn accesses the local exchange or other networks by means of bi-directional satellite radio bridges.

With respect to Examiner's rejection of claim 3, Applicant submits that the prior art fails to point out all the elements found in the claim. Claim 3 is dependent on claim 1, therefore claim 3 is not obvious unless claim 1 is obvious. Even if claim 1

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were found to be obvious, claim 3 is still not made obvious in light of the cited prior art. Schuster and Wiedeman are both directed to access to PSTN networks. While it is possible for the invention in claim 1 to connect to a PSTN, this is not what is disclosed in claim 3. As recited in claim 3, the local resident networks are able to communicate with one another without the necessity of using the PSTN as network backbone. The Examiner states that this connection is obvious in light of the prior art, and the motivation to make this connection is "allow user terminal access to the PSTN". However, access to the PSTN is precisely what the invention in claim 3 seeks to avoid. By allowing direct RLC to RLC connections, a user can bypass the PSTN if it was inoperable or nonexistent. As such, the Examiner's offered motivation teaches away from the claimed invention. Therefore, it is not obvious to modify the elements found in the prior art so as to point out the invention disclosed in claim 3.

Based on the foregoing, Applicant submits that claims 1-3 as amended are not obvious in light of the cited prior art.

The Examiner has rejected Claims 5 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Schuster et al., U.S. Patent 6,954,454, in view of Wiedeman et al., U.S. Patent 6,233,463 in further view of Bosch et al. (U.S.P.N. 5,839,053) and claim 7 in further view of Kelly et al. (U.S. Pub. No. 2002/0057097).

With respect to claims 5 and 6, Applicant submits that the subject matter disclosed is nonobvious in light of the cited prior art patents. Specifically, the Examiner repeats the previous rationale for rejection while adding prior art reference Bosch et al. Applicant submits that since claim 5 is dependent on claim 1, the above provided arguments made concerning claim 1 are applicable to the rejection of claim 5. Claim 6 merely recites all the elements of claim 1, as well as several dependent claims. Therefore, the response provided to the rejection of claim 1 is also applicable to the rejection of claim 6. Claim 7 is dependent on claim 6, as such, it is nonobvious in light of the cited prior art.

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Based on the above, Applicants respectfully submit that the claims of the present invention are in proper form for allowance. Favorable consideration and early allowance are therefore respectfully requested and earnestly solicited.

Respectfully Submitted,



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